

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) In reliable data transfer in which, when data is transferred from an initiator to a target, the data received by said target is checked for a communication error by using an error check code attached to said data, a transfer status indicating whether said communication error occurs is returned from said target to said initiator, and, if a transfer error occurring during said data transfer is detected by said transfer status, said initiator retries to transfer said data to said target,

a data transfer method for transferring logical records that are units of said data transfer between said initiator and said target, whereby:

a plurality of said logical records are batch transferred in a block are batch transferred, wherein a logical record is defined as a unit of said data transfer between said initiator and said target;

said initiator confirms said transfer status at every said batch transfer;

each said logical record is transferred by a transfer request issued by said initiator, wherein each said transfer request includes a transfer ID that is uniquely determined per logical record to be transferred; and

for each said logical record that meets a predetermined batch transfer condition, said target posts a completion status corresponding to said transfer

request for said logical record to a completion queue existing in said target upon correct reception of said logical record.

2. (Currently amended) In reliable data transfer in which, when data is transferred from an initiator to a target, the data received by said target is checked for a communication error by using an error check code attached to said data, a transfer status indicating whether said communication error occurs is returned from said target to said initiator, and, if a transfer error occurring during said data transfer is detected by said transfer status, said initiator retries to transfer said data to said target,

a data transfer method for transferring logical records that are units of said data transfer between said initiator and said target, whereby:

a plurality of said logical records are batch transferred in a block are batch transferred, wherein a logical record is defined as a unit of said data transfer between said initiator and said target;

each said logical record is transferred by a transfer request issued by said initiator, wherein each said transfer request includes a transfer ID that is uniquely determined per logical record to be transferred, and, upon correct arrival of the logical record on said target, said target posts a completion status corresponding to said transfer request for said logical record to a completion queue existing in said target;

said initiator confirms said transfer status at every said batch transfer; and

if said target detects a transfer error of said logical record in the middle of said batch transfer by said error check code, said target negates the reception of and stops posting said completion status of the logical record and subsequent logical records until said batch transfer terminates.

3. (Currently amended) In reliable data transfer in which, when data is transferred from an initiator to a target, the data received by said target is checked for a communication error by using an error check code attached to said data, a transfer status indicating whether said communication error occurs is returned from said target to said initiator, and, if a transfer error occurring during said data transfer is detected by said transfer status, said initiator retries to transfer said data to said target,

a data transfer method for transferring logical records ~~that are units of said data transfer~~ between said initiator and said target, whereby:

~~a plurality of said logical records are batch transferred in a block are batch transferred, wherein a logical record is defined as a unit of said data transfer between said initiator and said target;~~

said initiator confirms said transfer status at every said batch transfer;

when each said logical record transferred by a transfer request issued by said initiator arrives correctly on said target, said target posts a completion status corresponding to said transfer request for said logical record to a completion queue

existing in said target, wherein each said transfer request includes a transfer ID that is uniquely determined per logical record to be transferred; and

if said target detects a transfer error of said logical record in the middle of said batch transfer by said error check code, said target negates the reception of and stops posting said completion status of the logical record and subsequent logical records that are not permitted for reception by a value specified in a batch transfer condition field until said batch transfer terminates.

4. (Currently amended) The data transfer method as recited in claim 1, In reliable data transfer in which, when data is transferred from an initiator to a target, the data received by said target is checked for a communication error by using an error check code attached to said data, a transfer status indicating whether said communication error occurs is returned from said target to said initiator, and, if a transfer error occurring during said data transfer is detected by said transfer status, said initiator retries to transfer said data to said target,

a data transfer method for logical records that are units of said data transfer between said initiator and said target, whereby:

a plurality of said logical records in a block are batch transferred;
said initiator confirms said transfer status at every said batch transfer;
each said logical record is transferred by a transfer request issued by said initiator; and

for each said logical record that meets a predetermined batch transfer condition, said target posts a completion status corresponding to said transfer request for said logical record to a completion queue existing in said target upon correct reception of said logical record;

wherein, if one or more transfer errors are detected during said batch transfer between said initiator and said target, said target includes the ID of the earliest logical record in which a transfer error has been detected in said transfer status which is confirmed at every said batch transfer; and

said initiator starts a transfer retry from the logical record in which the transfer error occurred, based on said transfer status.

5. (Currently amended) The data transfer method as recited in claim 1, In reliable data transfer in which, when data is transferred from an initiator to a target, the data received by said target is checked for a communication error by using an error check code attached to said data, a transfer status indicating whether said communication error occurs is returned from said target to said initiator, and, if a transfer error occurring during said data transfer is detected by said transfer status, said initiator retries to transfer said data to said target,

a data transfer method for logical records that are units of said data transfer between said initiator and said target, whereby:

a plurality of said logical records in a block are batch transferred;

said initiator confirms said transfer status at every said batch transfer;

each said logical record is transferred by a transfer request issued by said initiator; and

for each said logical record that meets a predetermined batch transfer condition, said target posts a completion status corresponding to said transfer request for said logical record to a completion queue existing in said target upon correct reception of said logical record;

wherein, if one or more transfer errors are detected during said batch transfer between said initiator and said target, said target includes a list of the IDs of the logical records in which a transfer error has been detected in said transfer status which is confirmed at every said batch transfer; and

said initiator ~~retries~~ retries transfer of the logical records in which the transfer error occurred, based on said list.

6. (Original) The data transfer method as recited in claim 1, wherein, in the middle of said batch transfer, said initiator or said target can stop said batch transfer by issuing a cancel request.

7-14. (Canceled)